

What is claimed is:

1. A process for preparing a low glycemic index food or beverage composition comprising incorporating into the food or beverage composition a low-glycemic sweetener comprising a blend of sucrose and a component selected from the group consisting of a syrup and syrup solids comprising an acceptor selected from the group consisting of a sugar and a sugar alcohol having free hydroxyl groups at one or more of carbon positions numbers 2, 3 and 6 that can accept a glucose unit from sucrose, said blend having been reacted with a glucansucrase enzyme.
2. The process according to Claim 1 wherein there is prepared a low glycemic index food composition.
3. The process according to Claim 1 wherein there is prepared a low glycemic index beverage composition.
4. The process according to Claim 1 wherein the blend comprises sucrose and the component in a ratio of sucrose to the component varying from about 20:1 to 1:20.
5. The process according to Claim 3 wherein the low glycemic index beverage composition is a sports drink.
6. The process according to Claim 1 wherein the component is selected from the group consisting of a corn syrup and corn syrup solids that comprise an amount of about 2 to about 99 weight percent of maltose.
7. The process according to Claim 1 wherein the glucansucrase enzyme is obtained from lactic acid bacteria.
8. The process according to Claim 1 wherein the glucansucrase enzyme is obtained from *Leuconostoc mesenteroides*.
9. The process according to Claim 1 wherein the glucansucrase enzyme is obtained from a strain selected from the group consisting of *Leuconostoc mesenteroides* strains NRRL-B 1121, 1143, 1149, 1254, 1297, 1298, 1355, 1374, 1375, 1377, 1399, 1402, 1433, 23185, 23186, 23188, 23311, 742, 523, 21297.

10 The process according to Claim 9 wherein the strain is *Leuconostoc mesenteroides* NRRL-B-21297.

11 The process according to Claim 10 wherein the blend comprises sucrose and the component in a ratio of sucrose to the component of at least about 4:1, and wherein the component is maltose

12. The process according to Claim 1 wherein the low-glycemic sweetener is incorporated into the food or beverage composition in an amount ranging from about 0.1 to about 99.9% by weight of the food or beverage composition.

13. A process for reducing glycemic index of a food or beverage composition comprising incorporating into the food or beverage composition a low-glycemic sweetener comprising a blend of sucrose and a component selected from the group consisting of a syrup and syrup solids comprising an acceptor selected from the group consisting of a sugar and a sugar alcohol having free hydroxyl groups at one or more of carbon positions numbers 2, 3 and 6 that can accept a glucose unit from sucrose, said blend having been reacted with a glucansucrase enzyme, as compared with a food or beverage composition wherein there is incorporated a blend of sucrose and the component, that has not been reacted with a glucansucrase enzyme.

14 The process according to Claim 12 wherein the glycemic index of a food composition is reduced.

15. The process according to Claim 12 wherein the glycemic index of a beverage composition is reduced.

16. The process according to Claim 13 wherein the blend comprises sucrose and the component in a ratio of sucrose to component varying from 10:1 to 1:10.

17. The process according to Claim 15 wherein the beverage composition is a sports drink.

18. The process according to Claim 13 wherein the component is selected from the group consisting of a corn syrup and corn syrup solids that comprise an amount of about 2 to about 99 weight percent of maltose.

19. The process according to Claim 13 wherein the glucansucrase enzyme is obtained from lactic acid bacteria.

20. The process according to Claim 13 wherein the glucansucrase enzyme is obtained from *Leuconostoc mesenteroides*.

21. The process according to Claim 13 wherein the glucansucrase enzyme is obtained from a strain selected from the group consisting of *Leuconostoc mesenteroides* strains NRRL-B 1121, 1143, 1149, 1254, 1297, 1298, 1355, 1374, 1375, 1377, 1399, 1402, 1433, 23185, 23186, 23188, 23311, 742, 523, 21297.

22. The process according to Claim 21 wherein the strain is *Leuconostoc mesenteroides* NRRL-B-21297.

23. The process according to Claim 13 wherein the low-glycemic sweetener is incorporated into the food or beverage composition in an amount ranging from about 0.1 to about 99.9% by weight of the food or beverage composition.

24. The process according to Claim 21 wherein the blend comprises sucrose and the component in a ratio of sucrose to the component of at least about 4:1, and wherein the component is maltose.

25. A food product comprising a low-glycemic sweetener that comprises an oligosaccharide comprising alpha 1-3 and alpha 1-6 linkages, wherein the glycemic index of the food product is at least 10% lower than a control product that is made using conventional sweeteners.

26. The food product according to claim 25, wherein the low-glycemic sweetener is made by reacting sucrose with a component selected from the group consisting of a syrup and syrup solids comprising an acceptor selected from the group consisting of a sugar and a sugar alcohol having free hydroxyl groups at one or more of carbon positions numbers 2, 3 and 6 that can accept a glucose unit from sucrose, with a glucansucrase enzyme.

27. The food product according to claim 26, wherein the glucansucrase enzyme is obtained from a strain selected from the group consisting of *Leuconostoc mesenteroides* strains NRRL-B 1121, 1143, 1149, 1254, 1297, 1298, 1355, 1374, 1375, 1377, 1399, 1402, 1433, 23185, 23186, 23188, 23311, 742, 523, 21297.

28. The food product according to claim 26, wherein the ratio of sucrose to syrup or syrup solid is at least 4:1.